

**ABSTRACT OF THE DISCLOSURE**

A base station for a multi-carrier mobile communication system, which is equipped with an RF amplifier including input ports for inputting a plurality of input signals different in frequency of carrier from one another, dividers for respectively dividing each of the plurality of input signals inputted to the input ports into plural form, and phase shifters for respectively assigning a weight of phase to each of divided signals corresponding to a number obtained by subtracting 1 from the number of divisions. A plurality of first combiners are provided for respectively adding up the signals different in the frequency of carrier, out of the divided signals and signals each assigned the weight of phase, a plurality of amplifiers are provided for respectively amplifying signals outputted from the plurality of first combiners, and a second combiner is provided for adding signals outputted from the plurality of amplifiers to output one signal.